

**NEW YORK STATE
FRUIT TESTING
COOPERATIVE ASSOCIATION**



1961-62

NEW FRUITS

GENEVA, N. Y.

DIRECTORS
OF THE
NEW YORK STATE FRUIT TESTING
COOPERATIVE ASSOCIATION

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Cover Photos by Paris Trail

Geneva Strawberry,

Clyde Raspberry, Mutsu Apple, Canada Muscat Grape

A CATALOG OF NEW FRUITS 1961-1962

MOSTLY ORIGINATED AT THE NEW YORK STATE
AGRICULTURAL EXPERIMENT STATION

ORGANIZATION AND PURPOSE OF THE NEW YORK STATE FRUIT TESTING COOPERATIVE ASSOCIATION, INC.

The New York State Fruit Testing Cooperative Association, Inc., was organized in 1918 for the purpose of introducing for testing new fruits recommended as worthy of trial by the New York State Agricultural Experiment Station. No funds have ever been appropriated for the support of this Association and therefore a sufficient charge must be made for nursery stock to cover expenses. The Association has grown steadily with a membership today of about 4,500, representing 48 States and many foreign countries.

The only requirement for membership is that the tester must have an interest in new fruits. An annual fee of \$2.00 is levied, the fiscal year commencing September first. Paid-up members are entitled to a credit of \$1.00 as a premium. Premiums are not allowed to accumulate. Each member receives the annual catalog and notification of the annual meeting. This meeting is held each year at Geneva the third Thursday of September and features a large exhibit of new fruits, conducted tours of Station plantings and a program of talks by fruit specialists.

This Association has done great service in the past in helping to determine the merits of new fruits. Members are today rendering a real service to the fruit industry by growing, testing, and reporting on these newer varieties. Unfortunately a few assume that all introductions herein listed are being recommended as commercial varieties. Such an attitude defeats the purpose of this organization. We try to give a brief description, based on available data, of the performance of these varieties at Geneva. The strong and weak points of each variety are presented. Under other conditions of soil and environment they may perform much better or not as well as with us. Progress reports are always welcome. The sum total of members' experience together with our own records will largely determine future recommendations.

The Association is ever seeking to improve and expand its service to growers. Programs are under way to provide:

1. All the new apple and pear varieties on size-controlling or semi-dwarf rootstocks to induce early bearing and to hasten evaluation.
2. Grapes grafted on stock resistant to phylloxera and nematodes.
3. Custom propagation of specific varieties on specific rootstocks. (See page 38)
4. Virus free strawberries grown from virus free screen cage foundation stocks.
5. Virus free cherries budded on virus free rootstocks.
6. Virus free black raspberries grown from virus free foundation stock.

These services are being made available to you by our Association through cooperation of members of the several Departments at the New York State Agricultural Experiment Station.

RECENT INTRODUCTIONS

A thorough evaluation of a new fruit requires extensive testing under varied soil and climatic conditions. The following named varieties have shown sufficient promise at Geneva that the Experiment Station is recommending their trial on a limited scale for the purpose described:

Apples—Beverly Hills, Jersey Red, Jonadel, Kidd's Orange Red, Mutsu, Spencer, Tydeman's Red. See page 3. *Color Sports*—Gardner Delicious, Lalla Delicious, Vance Delicious, Boller McIntosh, Cornell McIntosh, Geneva McIntosh, Imperial All Red McIntosh. See page 4.

Pears—Dawn, Magness, Moonglow. See page 20.

Peaches—Collins, Jefferson, Loring, Merrill 49'er, Redglobe, Redskin, Royal Vee, Washington. See page 15.

Cherries—Rainier, Van, Venus, Vic. See page 12.

Nectarines—Cavalier, Lexington, Redchief. See page 14.

Grapes—Canada Muscat, Foche, New York Muscat, Seibel 4986, Seibel 5898, Seibel 9110. See page 26.

Blueberries—Bluecrop, Blueray, Collins, Earliblue, Herbert. See page 31.

Raspberry—Clyde. See page 32.

Blackberry—Darrow. See page 34.

Strawberries—Fletcher, Fortune, Frontenac, Fulton, Geneva. See page 35.

Elderberries—Johns Kent, Victoria. See page 38.

NUMBERED SELECTIONS

In order to give members an opportunity to help test promising selections from fruit breeding work of the New York State Agricultural Experiment Station at Geneva, the Association has propagated a number of outstanding seedlings which are still under number. Members who are interested in trying out these selections will assist the Experiment Station fruit breeders in evaluating this material.

The Geneva Experiment Station, however, must retain control over these selections until they have been proved worthy of introduction to the general public, at which time they will be named. Therefore, members will be requested to sign an agreement that they will grow the plants for test purposes only and that they will not sell, give away, or otherwise distribute plants or propagating material until the selections are named or until they are authorized to do so by the Department of Pomology of the New York State Agricultural Experiment Station. The following are available in limited quantities.

<i>Apple</i>		<i>Apple</i>	
New Jersey 10.....	See page 7	New York 44421-1.....	See page 8
New York E-6.....	See page 7	New York 43021-2.....	See page 7
New York E-18.....	See page 7	New York 50-2.....	See page 7
New York E-145.....	See page 7	New York 50-9.....	See page 7
New York 16884.....	See page 7	Ottawa T-441.....	See page 8
New York 44416-6.....	See page 7	Ottawa 292.....	See page 8
New York 44420-1.....	See page 8		

<i>Apple</i>	
New York 49-19.....	See page 7
New York 49-23.....	See page 10
New York 11894.....	See page 11
New York 11902.....	See page 11
New York 58-22.....	See page 10

<i>Cherry</i>	
New York 591.....	See page 13
New York 1507.....	See page 13
New York 1519.....	See page 13
New York 1588.....	See page 13
New York 1599.....	See page 13

<i>Pear</i>	
New York 4885.....	See page 22
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<i>Plum</i>	
New York 826.....	See page 24
New York 858.....	See page 24
New York 929.....	See page 24
New York 930.....	See page 24
New York 981.....	See page 24

<i>Peach</i>	
New York 1466.....	See page 17
New York 1952.....	See page 17
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New York 2604.....	See page 17

<i>Apricot</i>	
New York 345.....	See page 19
New York 346.....	See page 20
New York 477.....	See page 20

<i>Nectarine</i>	
New York 884.....	See page 15
New York 1017.....	See page 15
New York 2603.....	See page 15

<i>Grape</i>	
New York 12128.....	See page 28
New York 14528.....	See page 28
New York 15302.....	See page 29
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<i>Raspberry</i>	
New York 30001.....	See page 32
New York 27189.....	See page 32
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<i>Strawberry</i>	
New York 418.....	See page 36
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<i>Currant</i>	
New York 2111.....	See page 37

<i>Elderberry</i>	
New York 12.....	See page 38

APPLES

During recent years a number of new apple varieties have been introduced by various Experiment Stations.

The Monroe introduced by the New York Station in 1949 is already being accepted by growers as a possible replacement for Baldwin. It is a heavy annual cropper, has outstanding processing quality and has acceptable dessert quality. Idared, a late keeping dessert variety and Spartan, a McIntosh type which is picked later and keeps longer than McIntosh are arousing considerable grower interest. These and other varieties listed in this catalog are showing promise of commercial value and may eventually assume commercial importance.

The following apple varieties are being offered this year and are listed in order of ripening season, from early to late.

SUMMER APPLES		<i>Where Orig.</i>	<i>Year Introd.</i>
Ottawa T-441	Crimson Beauty × Red Melba	Canada	—
Lodi	Montgomery × Yellow Transparent	N. Y. Sta.	1924
Ottawa 292	Melba × Red Astrachan	Canada	—
Wellington	Cortland × Crimson Beauty	N. Y. Sta.	1955
Red Melba	Pate Sport	Canada	—
Beverly Hills	Melba × Early McIntosh	Calif.	1945
New York 16884	Lodi × Melba	N. Y. Sta.	—
Greendale	McIntosh × Lodi	"	1938
EARLY FALL			
Puritan	McIntosh × Red Astrachan	Mass.	1953
Early McIntosh	Yellow Transparent × McIntosh	N. Y. Sta.	1923

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	<i>Parentage</i>	<i>Where Orig.</i>	<i>Year Introd.</i>
EARLY FALL			
New York 50-9	Jonathan × Lodi	N. Y. Sta.	—
Gravenstein	Mead Red Sport	Mass.	1939
New York E-18	Gravenstein (open pollinated)	N. Y. Sta.	—
New York 49-19	Cortland × Lodi	"	—
Milton	Yellow Transparent × McIntosh	"	1923
Barry	McIntosh × Cox Orange	"	1957
New York 50-2	Carlton × McIntosh	"	—
Tydeman's Red	Wooster Pearmain × McIntosh	England	1945
MID-SEASON			
New York E-145	Tetraploid Wealthy (open pollinated)	N. Y. Sta.	—
Webster	(Ben Davis × Jonathan) × (B. D. × Jon.)	"	1938
McIntosh	Boller, Cornell, Geneva, Imperial All Red, Rogers Sports	N.Y.	—
New York 44416-6	Macoun × Red Spy	N. Y. Sta.	—
Vance Delicious	Red Sport	—	—
Franklin	McIntosh × Delicious	Ohio Sta.	1937
Cortland	Ben Davis × McIntosh	N. Y. Sta.	1915
New York 44420-1	N. W. Greening × Red Spy	"	—
Kidd's Orange Red	Cox Orange × Delicious	New Zealand	1924
Delicious	Gardner, Lalla Sports	—	—
Macoun	McIntosh × Jersey Black	N. Y. Sta.	1923
Spartan	McIntosh × Yellow Newtown	Canada	1936
LATE			
Jonadel	Jonathan × Delicious	Iowa	1958
Monroe	Jonathan × Rome Beauty	N. Y. Sta.	1949
New York 43021-2	Red Spy × Golden Delicious	"	—
New York E-6	Red Spy × Golden Delicious	"	—
Idared	Jonathan × Wagner	Idaho Sta.	1942
Melrose	Jonathan × Delicious	Ohio Sta.	1944
Spencer	McIntosh × Golden Delicious	Canada	1959
Mutsu	Golden Delicious × Indo	Japan	1948
New York 44421-1	N. W. Greening × Monroe	N. Y. Sta.	—
New Jersey 10	Rome Beauty × open	N. J. Sta.	—
Jerseyred	Galia Beauty × White Winter Pearmain	"	1954
CRAB APPLES			
Dolgo	A Russian Crab	S. Dak. Sta.	1916
Young America	Unknown	N. Y.	—
ORNAMENTAL APPLES			
Redfield	Wolf River × M. niedzwetzkyana	N. Y. Sta.	1938
New York 11894	Malus arnoldiana × M. niedzwetzkyana	"	—
New York 11902	Malus arnoldiana × M. spectabilis	"	—
New York 49-23	M. arnoldiana × M. niedzwetzkyana	"	—
Van Eseltine	M. arnoldiana × M. spectabilis	"	1937
New York 58-22	McIntosh (open pollinated)	"	—

Barry—This is the latest introduction from the New York Agricultural Experiment Station. It is medium to large in size, a solid dark red blush in color. Its quality would rate as good to very good for both dessert and culinary uses. Barry is a fall variety, reaching picking maturity about two weeks before McIntosh.

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Beverly Hills—originated by Dr. W. H. Chandler at the University of California and introduced in 1945. It is a high quality early, dessert type. It does not always attain good color at Geneva but the quality is always good. It has a low chilling requirement and has performed particularly well in hot seasons at Geneva.

Cortland—ranks third in New York State in total production. Cortland is now well known as a heavy annual cropper of large sized, attractively red-striped, white fleshed fruit of excellent dessert quality. It also has culinary value—particularly for salads and pies. For best keeping quality, Cortland should be picked within four to five days after the optimum picking date for McIntosh. In commercial practice, however, Cortland, because it hangs to the tree so much better than McIntosh, is usually picked much too late. This may result in a shortened storage life and severe storage losses. When picked at the proper time, Cortland has a four to six week longer storage life than McIntosh.

Early McIntosh—resembles McIntosh in appearance but is less aromatic and more sprightly. Its tree is vigorous and productive. One of its major faults is that it sets too heavy a crop on alternate years. Severe thinning is needed to obtain good commercial size. Early McIntosh ripens about one week after Melba and about with the Duchess. Its main value is for the home and local markets.

Franklin—at Geneva ripens a few days after McIntosh and is a high quality, though mild flavored dessert apple. The fruit is round-conic in shape and attractively red striped with a heavy bloom. It has a tendency toward biennial bearing which may not be serious where blossom thinning sprays are used.

Greendale—its name suggests green color and it is handsome green in color like its parent, Lodi, while it is shaped like its other parent, McIntosh. The combination of these two characters has resulted in an attractive, trimly shaped, green apple. Its quality, too, is as good as its appearance—excellent for both eating and cooking. To extend the season of Lodi this sort is unsurpassed for a roadside trade which desires a good green apple late in August.

Idared—originated at the Idaho Agricultural Experiment Station from a cross between Jonathan × Wagner. It is a handsome solid bright red apple of good quality, maturing about a month after McIntosh. At Geneva, Idared has performed very satisfactorily and shows real promise as a late keeping dessert or general purpose apple.

Jerseyred—a Rome Beauty type ripening about with Rome. It is of nearly solid dark red color and somewhat better than Rome in quality, although as a dessert variety it would rate only fair. It may have value as a late processing type.

Jonadel—a Jonathan type dessert variety from the Iowa Station. It ripens with

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Jonathan and may be stored until March. In Iowa it is reported to attain larger size than Jonathan and apparently is not subject to Jonathan spot or breakdown.

Kidd's Orange Red—We are fruiting this variety for the first time this year, hence have very little first hand knowledge of it. It originated in New Zealand in 1924 and was later introduced to the U. S. by the U.S.D.A. New Crops Research Branch. Paul Stark of Stark Bros. Nurseries reports very favorably on this variety as it performs in England and New Zealand.

Lodi—has rapidly become a most important early yellow commercial apple. Its fruits ripen a few days later than Yellow Transparent but are larger and stand up better in shipping. The tree is large and although it tends to bear biennially, can be made annually productive through proper use of blossom thinning sprays.

Macoun—is considered the highest quality dessert apple grown in the Northeast. Many growers are reporting premium prices for it; its popularity is increasing both commercially and for the home garden. The tree is upright in habit and may need extra training to develop a spreading top. However, as the tree comes into bearing, the upright habit is minimized. It responds to chemical thinning which ensures good fruit size and annual bearing.

Melrose—is a new variety from the Ohio Experiment Station, Wooster, Ohio which has performed well at Geneva. It resulted from a cross between Jonathan and Delicious and the fruits resemble Jonathan except they are not quite so highly colored and are somewhat more oblate. Melrose is a late keeping high quality dessert apple and is worth a trial planting where an apple of this type and season is wanted. Requires thinning to achieve size and help maintain annual cropping.

Milton—is a handsome apple of Wealthy season and sells readily on roadside markets. Its resistance to rust is an important factor in the Hudson River Valley. The tree is hardy, vigorous and an annual bearer. The fruits are pinkish red with a heavy bloom. The flesh is white, tender, crisp, juicy, and of McIntosh flavor but more sprightly.

Monroe—tree medium sized, upright-spreading, vigorous and a heavy annual bearer. Fruit large roundish-conic; color similar to Jonathan, its maternal parent. Flesh yellowish, crisp, juicy and mildly subacid; quality good. Winter apple that offers possibilities for dessert and culinary uses. Shows promise of a possible replacement for Baldwin. In processing tests Monroe has rated very high for sauce, frozen and canned slices. Monroe is somewhat subject to mildew which is readily controlled by including sulfur in the spray schedule up to petal fall.

Mutsu—A large yellow "Golden Delicious" type that originated in Japan and was introduced in 1948. It has fruited for several years at Geneva and we would rate it as having good dessert and processing quality. To date it has shown no susceptibility to russetting or storage shriveling. It is well

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worthy of a trial planting where an apple of Golden Delicious type is wanted.

New Jersey 10—a very attractive late dessert type. The fruit is shaped and colored much like a well colored Delicious. May have value as a late dessert variety.

New York E-6—(Red Spy $\times$ Golden Delicious)—a very promising new selection. It is of large size, 75% red striped, very firm fleshed and of exceptionally high quality. Being a triploid, it is of no value in pollinating other varieties.

New York E-18—(Red Gravenstein, open pollinated)—A productive tetraploid seedling of Red Gravenstein which resembles Gravenstein in appearance and flavor. It matures about one week after Gravenstein, ripens evenly and is considerably firmer than Gravenstein.

New York E-145—("Giant" or Tetraploid Wealthy, open pollinated)—This is a large productive, attractively colored Wealthy type of good quality, ripening ten days before McIntosh. We consider this a most promising selection and worthy of an extended trial. It is a triploid and the usual pollination precautions should be followed.

New York 49-19 (Cortland $\times$ Lodi)—Resembles Cortland in appearance except that it is a much lighter red. The flesh is white, firm and of good dessert quality. Ripens ten days before McIntosh and like Cortland hangs to the tree well.

New York 50-2—(Carlton $\times$ McIntosh)—A good quality McIntosh type ripening about ten days ahead of McIntosh. In color finish and flavor, this selection is very similar to McIntosh.

New York 50-9 (Jonathan $\times$ Lodi)—An attractive solid red, firm fleshed early dessert variety ripening a week ahead of Wealthy. Its firm flesh is outstanding for an apple of its season. It has been annually productive.

New York 16884 (Lodi $\times$ Melba)—This selection continues to look very promising. Its large handsome fruits ripen just after Melba. The trees are very productive and the fruit is firm for an early variety. Growers who have fruited this selection have given very enthusiastic reports on its performance.

New York 43021-2—(Red Spy $\times$ Golden Delicious)—is a late dessert type ripening about a week ahead of Northern Spy. It is large, firm fleshed and of good quality. The color is a brilliant blush scarlet over a light yellow ground.

New York 44416-6—(Macoun $\times$ Red Spy)—a good quality, firm fleshed, red-blushed apple which matures just after McIntosh. Its firm flesh, high quality and good appearance are its chief attributes. A promising dessert variety.

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New York 44420-1—(N. W. Greening $\times$ Red Spy)—a Northern Spy type maturing about with Cortland. It is of large size, very attractively colored being a solid scarlet blush and the flesh texture and flavor is similar to Northern Spy. Trees come into bearing early and apparently bear annually. It blooms late, along with Rome Beauty. Preliminary processing tests indicate that this selection is a first class sauce and frozen slice variety. It would appear to be worthy of an extensive trial.

New York 44421-1 (N. W. Greening $\times$ Monroe)—A large bright green processing type which has been rated as an excellent sauce variety in preliminary processing tests at the Station. We are hopeful that this selection will prove to be a good replacement for R. I. Greening. Like Greening it is a triploid, hence the usual practice of providing adequate pollination should be followed.

Ottawa 292—(Melba $\times$ Red Astrachan)—a fine early apple from the Central Experimental Farm, Ottawa, Canada, which matures about a week before Melba. It is large, attractively red-striped and blushed and has high quality, although somewhat sprightly. It ripens unevenly and requires at least two pickings. This selection appears to be superior to other varieties of its season.

Ottawa T-441 (Crimson Beauty $\times$ Red Melba)—A very early variety from the Ottawa Station, Canada which ripens with Crimson Beauty. It is solid red and has much of the Melba high quality although it is of milder flavor.

Puritan (McIntosh $\times$ Red Astrachan)—A new McIntosh type from the University of Massachusetts which reaches picking maturity about with Early McIntosh. It has fine appearance being a solid red blush in color and averages larger than Early McIntosh. It is more acid in flavor than Early McIntosh and for dessert purposes rates fair to good in quality. It is well worthy of trial for commercial plantings.

Redhook—has a very handsome dark red color and heavy bloom, attractive color being an outstanding characteristic. Sometimes the flesh of the apples is decidedly red. The fruit averages about as large as McIntosh and ripens between Milton and McIntosh. It is sprightly in flavor and is a good dessert apple for the home and roadside market.

Ruby—produces large, fairly attractive fruit of good quality for both dessert and processing. It is a particularly good keeper. May have value as a late general purpose variety.

Spartan—A very attractive McIntosh type apple maturing about one week after McIntosh. It has firmer flesh than McIntosh and has excellent dessert quality. It keeps in storage several weeks longer than McIntosh and is recommended for trial where a McIntosh type apple, which may be picked after and stored longer than McIntosh, is wanted.

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Spencer—has fruited at Geneva for over ten years and has been annually productive. It is an attractive, nearly solid blush type, round-conic in shape and good dessert quality. It ripens two to three weeks after McIntosh.

Tydeman's Red—We have not as yet fruited this variety at Geneva but good reports from British Columbia, Canada have stimulated considerable grower interest in the U. S. It is a dessert type, maturing two to three weeks before McIntosh.

Webster—A large handsome red streaked apple which should become a valuable processing variety. In processing tests, Webster has rated high particularly for frozen slices. Webster produces heavy crops and is in season from October 1st to December 15th. As it is a triploid and produces poor pollen, provisions must be made to insure ample pollination.

Wellington—is a large attractive red-striped apple in season just ahead of Melba and unlike most early apples matures its fruit all at one time, hence requires only one picking. This variety appears to be superior commercially to other varieties in its season. In dessert quality this selection will rate fair to good but its fine processing qualities are its chief attribute and it shows real promise as an early commercial sauce apple.

RED SPORTS

Gardner Delicious—A solid blush type of Delicious which has performed well and which is a very "typy" Delicious. It appears to color earlier than Richared, but is otherwise similar.

Lalla Delicious—A red striped color sport of Delicious which has performed very well at Geneva. Where a red striped type of Delicious is wanted, Lalla Delicious would seem well worthy of a trial.

Vance Delicious—is an early coloring and apparently early maturing sport of Delicious. It develops a beautiful solid red blush color with very little striping. The color is brighter than Starking. At Geneva, in most seasons, it reaches picking maturity about a week earlier than Starking. In other respects, it appears to be identical to Delicious.

Mead Gravenstein—differs from the old Gravenstein in the solid dark red fruits. Gravenstein is a most excellent autumn apple, but this new color sport is so much superior in appearance to any of its kin that in the future its culture alone should be recommended.

Rogers McIntosh—one of the oldest color sports of McIntosh and perhaps the most widely grown. It attains an attractive dark solid blush red color.

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Boller McIntosh—is a fine sport of McIntosh, credited to Arthur Boller, Sodus, N. Y. It develops a good blush color and the fruit is firmer than regular McIntosh. In other respects it appears to be identical to McIntosh.

Cornell McIntosh—a fine bright colored sport of McIntosh found September, 1954 by L. G. Klein in the Cornell Orchard, Ithaca, N. Y. It appears to be identical to regular McIntosh except for the much improved color. Should be tested on limited scale.

Geneva McIntosh—A fine solid bright red blush sport of McIntosh found as a limb sport in one of the Station plantings. This is very symmetrical and has a more brilliant color than other McIntosh sports in our collection.

Imperial All Red McIntosh—A fine, solid blush, medium red color sport of McIntosh. This sport has never shown any striping at Geneva.

Red Melba—is a color sport of Melba from Canada. The fruit is solid red striped with bright red over pale waxy yellow—an attractive color combination. It is of medium size, mildly and pleasantly flavored and highly aromatic. The season is ahead of and shorter than that of Early McIntosh, averaging about two pickings. The apples are very tender and bruise easily but are well adapted for the roadside stand and the home.

Clifton Rome—This is one of the better color sports of Rome Beauty. It develops a brilliant bright red solid blush over the entire fruit. In other respects, it appears to be identical to Rome Beauty.

C R A B A P P L E S

Dolgo—is a small, oblong, handsome red crab apple imported from Russia in 1897 by the late Professor N. E. Hansen of the South Dakota Experiment Station. The fruit is full of juice, jellies easily, and makes a rich, ruby-red jelly of beautiful color and excellent flavor. The tree is hardy, vigorous, and productive; the season early September.

Young America—produces abundantly, attractive red fruits of large size and good quality. Jelly made from the fruit is a clear, beautiful red and splendidly flavored. The tree is especially vigorous and hardy. The season is about the middle of September. Young America and Dolgo should be planted as ornamentals as well as for their fruit.

O R N A M E N T A L A P P L E S

New York 49-23—an ornamental crab apple with unusually colorful rose-red blossoms. It blooms at two to three years of age and the fruit is an attractive small red crab apple.

New York 58-22—(McIntosh (open pollinated))—A small red crab with very large pure white single blossoms. The tree is upright spreading in

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habit and the fruits hang on the tree until late winter. If after further testing this selection appears to have sufficient merit, it may be named "Snowdrift"—a name suggested by its profusion of pure white blossoms.

New York 11894—(*Malus arnoldiana* × *M. niedzwetzkyana*)—A very floriferous red-fruited crab. The flowers are rose-red in color—very attractive. The tree is of medium size and upright spreading in habit. The foliage has a distinct reddish tinge.

New York 11902 (*M. arnoldiana* × *M. spectabilis*)—A very beautiful crab with shell pink, semi-double blossoms. The tree is much less upright, but in other respects it is similar to its sister seedling Van Eseltine.

Redfield—an apple for the lawn and other ornamental plantings because of its large and very dark pink flowers. The fruit is medium in size, dark deep solid red in color, with deep red flesh. The foliage is dark with a reddish green tinge early in the season. This is a very desirable ornamental.

Van Eseltine—a beautiful ornamental crab named in honor of the late originator. Buds pendulous and red, while open flowers are double and light pink. Tree upright.

DWARF APPLES

There has been a great deal of interest in recent years in apples on a size controlling root system among home growers as well as commercial apple producers. In general the two most outstanding characteristics of trees on such stocks are earliness of bearing and a smaller tree which facilitates orchard operations, such as pruning, spraying and harvesting. Experimentation with some of the dwarfing and semi-dwarfing apple root stocks of the East Malling series, as E.M. IX, E.M. VII and E.M. II has shown that the combinations of varieties and root stocks listed by us will give satisfactory performance.

The E.M. IX rootstock gives a typical dwarf tree that starts bearing the second or third year after planting. Since the root system of E.M. IX is brittle, it is usually recommended that trees on this stock be either supported by a stake or a trellis. Trees on this rootstock are best adapted to home gardens.

E.M. IX can also be used as an interstock interposed between a standard seedling rootstock and the fruit bearing variety. When used in this way, the dwarfing effect is not quite as severe as when used as rootstock; a strongly anchored tree that might best be spaced at 10 by 20 feet is obtained. Trees dwarfed by an interstock of E.M. IX reach approximately one-third the size of the same variety growing directly on a standard seedling rootstock.

The E.M. VII and E.M. II rootstocks limit growth of the variety to a lesser degree but still hasten bearing. E.M. VII is a typical semi-dwarfing rootstock giving a tree of approximately half the size that the same variety would reach when growing on a standard seedling rootstock. E.M. VII is well adapted to heavy soils while E.M. II, a slightly more vigorous rootstock that

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still is considered as semi-dwarfing, is best adapted to lighter soils.

Whenever apple varieties are propagated on clonal rootstocks that control tree size, it is essential that the rootstock stem portion is at least 6" long. The variety must be budded in the nursery at least this distance above the ground level.

On transplanting such trees to the orchard the bud union must be above ground to prevent cion rooting. The trees can be planted deeper in order to provide better anchorage. Even the extreme dwarf trees on E.M. IX when budded high and planted deep, can be safely grown in most situations without staking or other support.

In recent years four new clonal apple roostocks, known as the Malling-Merton or MM stocks, have been introduced. These are MM 104, 106, 109 and 111. These apple rootstocks are woolly aphid resistant and two of them, MM 106 and 111, are semi-dwarfing stocks.

CHERRIES

All sweet cherry varieties are self-unfruitful. Two compatible varieties must be planted near each other to provide for cross-pollination. Most varieties will successfully pollinate the other varieties, but four varieties, viz., Bing, Emperor Francis, Lambert and Napoleon will not pollinate each other and must be planted with some other variety to insure a fruit set.

The Association now has a program of growing seedling Mazzard rootstocks from seed sources known to be free of virus. Buds from indexed virus free trees are used. This enables us to furnish trees which are virus free as far as can be determined. Our supply of these virus free trees will be limited for sometime. We, therefore, will also continue to offer some cherries of certified virus free buds grown on commercial Mazzard rootstock.

		<i>Where Orig.</i>	<i>Year Introd.</i>
EARLY CHERRIES			
New York 1588	Emperor Francis × English Morello ?	N. Y. Sta.	—
Venus	Hedelfingen × Windsor	Canada	1959
MID-SEASON			
Rainier	Bing × Van	Washington	1960
Emperor Francis	Unknown	European	—
New York 1507	Schmidt × Bing	N. Y. Sta.	—
New York 1599	Emperor Francis × Gil Peck	"	—
New York 1519	Schmidt × Lambert	"	—
Gil Peck	Napoleon × Giant	"	1936
LATE			
Van	Empress Eugenie × open	Canada	1944
Vic	Bing × Schmidt	"	1959
Noble	Unknown	European	—
Hedelfingen	"	"	—
New York 591	Oswego × Giant	N. Y. Sta.	—

Emperor Francis—is a large, high-quality cherry of the Napoleon type. The cherries have been less subject to cracking than those of Napoleon. The color

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of the two fruits is similar, except that those of Emperor Francis are a little redder and become darker. All in all, Emperor Francis promises to be one of the best main-crop sweet cherries.

Gil Peck—was named in honor of the late Professor Gilbert W. Peck of Cornell at the request of the Indians of the Six Nations. The fruit is large, dark purplish black, similar in shape to Giant and as good in quality. It is firm fleshed, juicy, sweet and richly flavored. The season is late midseason. Gil Peck is one of the best cherries of its season despite the fact that the fruits may occasionally crack in rainy harvest periods.

Hedelfingen—ripens just ahead of Windsor and Lambert. Its performance in New York, Canada and Europe justifies its being recommended as a large firm-fleshed, high quality, late, black cherry of the Lambert type. The fruit is more resistant to cracking than most cherries.

New York 591—(Oswego $\times$ Giant)—is the best sweet cherry to follow Lambert. It ripens one week later than Lambert. It is a medium-sized, black cherry with flesh which is slightly tough until it is dead ripe. The flavor is sweet and good. Little cracking has been observed in this variety. The tree is very vigorous and moderately productive.

New York 1507—(Schmidt $\times$ Bing)—is a productive variety ripening about Schmidt season. The fruit is medium to large, attractive and black in color. The flesh is sweet, firm and crisp and the quality is very good.

New York 1519—(Schmidt $\times$ Lambert)—is a productive cherry ripening a few days later than Schmidt. The fruit is large and very dark in color. The flesh is firm, crisp, juicy, sweet and of good quality. This cherry appears to be more resistant to cracking than most varieties.

New York 1588—(Emperor Francis $\times$ English Morello?)—Tree less winter hardy than Windsor and moderately productive. The fruit is very large and ripens six days before Black Tartarian. Skin is yellow ground color with 40% attractive bright red over color. Flesh is light yellow, soft and sweet. The quality is good.

New York 1599—(Emperor Francis $\times$ Gil Peck)—Tree is hardy, vigorous and productive. The fruit ripens in midseason or two days after Emperor Francis. It is large with dark purplish-red skin. The flesh is red and very sweet. This cherry is one of the most promising of recent selections.

Noble—is a late dark-colored firm-fleshed sweet cherry for market and home use. Its season of ripening is between Schmidt and Hedelfingen. The fruit is large, heart-shaped, slightly flattened at the apex, dark-purplish red and of high quality. The fruits seem to crack less than those of several of the late sweet cherries. It is an old English variety and has performed well at Geneva.

Rainier—Trees are vigorous, very productive, early bearing and very hardy in both bud and wood. It ripens four days before Napoleon. The fruit is large, firm and high in quality. The skin is attractive yellow with con-

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siderable pink blush. The flesh is light yellow and the juice is colorless. Sugar is equal to and acidity is lower than that in Bing fruits. It is effectively pollinated with Napoleon and Emperor Francis.

Van—The tree is large, outstandingly hardy and a heavy bearer. It ripens just before Windsor. The fruit is large, black with bright luster, very firm, blocky shape with short stem. It is less susceptible to cracking than Lambert. The quality is good.

Venus—Tree is vigorous and very productive. Fruit ripens midseason, or five days after Black Tartarian, is large and high in quality. Flesh is red, less firm than Lambert, thus is less subject to cracking. The skin is dark purplish-red and shiny. It sometimes oversets, reducing fruit size but under normal conditions of pollination this should not occur often.

Vic—The trees are large and have been consistently heavy bearers. It ripens with Windsor and is larger and darker. Quality is good. It is superior to Windsor for canning and it is satisfactory for freezing and Maraschino purposes.

NECTARINES

Nectarines are more susceptible to brown rot than peaches. However, the important point in the control of brown rot is thorough control of the insects whose feeding punctures permit entry of the brown rot. With good control of the insects and diseases, growing of nectarines is very rewarding for their delicious flavor makes them a very popular fresh fruit.

	<i>Parentage</i>	<i>Where Orig.</i>	<i>Year Introd.</i>
New York 884	Big Boy × Schumaker (selfed)	N. Y. Sta.	—
New York 2603	N. Y. 303 (open pollinated)	"	—
New York 1017	(Livingston × Greensboro) selfed	"	—
Rivers Orange	Unknown	European	—
Redchief	VPI peach selection	Va. Sta.	1952
Lexington	VPI 13 selfed	"	1959
Cavalier	(P.I.43143 × VPI peach seedling) selfed	"	1952
Nectacrest	Garden State × N. J. 7432	N. J.	1947

Cavalier—is a large attractive, yellow-fleshed nectarine ripening nearly two weeks before Elberta. The flesh is juicy, tender and fine grained. The flavor is sweet and slightly astringent and is rated fair quality. This variety was introduced because of its outstanding ability to escape infection by brown rot. The tree is vigorous and productive.

Lexington—is a productive, medium sized, attractive nectarine, ripening just before Redchief or about 2½ weeks before Elberta. It is yellow fleshed and slightly soft. The flavor is sweet and slightly strong and it is the best yellow fleshed nectarine in its season. It is very hardy and quite resistant to spring frost.

Nectacrest—is a large, white-fleshed, freestone nectarine. The flesh is fairly firm and it has a fine nectarine flavor. This variety ripens about a week and a half before Elberta. The tree is vigorous and hardy.

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New York 884—(Big Boy × Schumaker) selfed—is our earliest nectarine and ripens with Mikado. Its fruit is medium, white-fleshed and a clingstone. It is recommended for trial due to its high quality, and hardiness.

New York 1017—(Livingston × Greensboro) selfed—is a large, white-fleshed, freestone ripening about four weeks before Elberta. The flesh is firm, slightly coarse and juicy and the flavor is good. The tree is productive, hardy and upright in habit of growth. Care in pruning is necessary to avoid weak crotches.

New York 2603—(N. Y. 303, open pollinated)—is a large yellow-fleshed nectarine ripening about a week before Redhaven. The fruit has an attractive yellow ground color overlaid with a 90% red blush. The flesh is fairly firm, slightly coarse, juicy and the flavor is sweet and rich. This selection looks very promising.

Redchief—is a productive, medium sized, highly colored nectarine which ripens about 2½ weeks before Elberta. The flesh is white, firm and slightly coarse. The flavor is rather strong but good, and the quality would be rated good. The variety is reported to be more resistant to brown rot than most varieties when the standard peach spray program is followed. It is quite hardy and resistant to spring frost.

Rivers Orange—is a yellow-fleshed nectarine which ripens in early mid-season. The fruit is a freestone nearly covered with a dark red blush. No nectarine has a richer, sweeter flavor. This is one of the choicely good European sorts.

PEACHES

New peach varieties are being introduced so rapidly that it is confusing to the grower to know just what kinds to plant. He must first know his market or outlet. If he is interested in a succession thruout the season, varieties are now available for such a purpose. The Association is propagating some of the more promising new kinds and these will be released from time to time. If possible a grower should have a small test orchard to determine the kinds best suited to his conditions.

VERY EARLY	Parentage	Where Orig.	Year Introd.
Earlired	Redhaven × B3-674 (Halehaven × B3 293)	USDA Beltsville	1960
Collins	Jerseyland × N. J. 188	N. J. Sta.	1959
New York 2602	Valiant × Veteran	N. Y. Sta.	—
New York 2604	Valiant × Veteran	"	—
Royal Vee	(Halehaven × Vedette) × Veteran	Canada	1960
Sunhaven	Redhaven × S. H. 50 (J. H. Hale × Halehaven)	Mich. Sta.	1955
Prairie Dawn	Valiant × Halehaven	Ill. Sta.	1946

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EARLY

Oriole	Slappey × Dewey	N. J. Sta.	1925
Raritan Rose	J. H. Hale × Cumberland	"	1936
Jerseyland	104325 [J. H. Hale × (Slappey × Dewey)] (ocp.)	"	1946
Redhaven	Halehaven × Kalhaven	Mich. Sta.	1940

MID-SEASON

Triogem	J. H. Hale × Marigold	N. J. Sta.	1938
New York 1952	Colora × open	N. Y. Sta.	—
Fairhaven	J. H. Hale × South Haven	Mich. Sta.	1946
Sunhigh	J. H. Hale × (Carman × Slappey)	N. J. Sta.	1938
Redrose	J. H. Hale × Delicious	"	1940
New York 1466	Champion × Raritan Rose	N. Y. Sta.	—
Richhaven	Redhaven × S. H. 50 (J. H. Hale × Halehaven)	Mich. Sta.	1955
Redglobe	W 3-16 × Fireglow	USDA, Beltsville	1954
Washington	V.P.I. 15 × Sunhigh	Va. Sta.	1959
Loring	Frank × Halehaven	Mo. Sta.	1946
Merrill 49'er	J. H. Hale (open pollinated)	Calif.	1950
Veteran	Vaughan × Stark Early Elberta	Canada	1928
Kalhaven	J. H. Hale × Kalamazoo	Mich. State	1936

LATE

Redskin	J. H. Hale × Elberta	Md. Sta.	1944
Jefferson	J. H. Hale × Valiant	Va. Sta.	1960
Afterglow	J. H. Hale × 27116 (Slappey × Dewey)	N. J. Sta.	1938

Afterglow—is a large yellow-fleshed freestone which ripens a few days later than Elberta. It is a high quality peach which looks promising to extend the peach season.

Collins—is a medium sized peach which ripens before Sunrise, or about 8½ weeks before Elberta. It is three-quarters to completely covered with bright red and has short pubescence. The flesh is yellow and the quality is good. It has not fruited at Geneva, but is reported to be a vigorous and productive variety which requires early and heavy thinning. It is a semi-cling when picked, but is freestone when fully ripe.

Earlired—is a highly colored, roundish, attractive peach ripening 4-5 days after Erlyvee or just under eight weeks before Elberta. The flesh is yellow, juicy, slightly coarse, and quite firm. The flavor and quality are good for such an early peach. It is a semi-clingstone when soft ripe. The tree is vigorous. This peach is quite promising for an early variety which will stand commercial handling.

Fairhaven—is in season about with Sunhigh or two and one-half weeks before Elberta. This yellow-fleshed freestone has very fine quality and is very attractive. The trees are vigorous and tend to over bear if not well thinned.

Jefferson—is a large yellow fleshed, fully freestone peach that ripens two to three days after Elberta. The fruits are highly colored with about one-half bright red blush over a bright orange yellow. The flesh is comparable to that of J. H. Hale in firmness, texture and flavor and its quality closely

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approaches that of J. H. Hale. The tree is vigorous and produces a heavy set of buds which have shown outstanding hardiness to blossoming season frosts. Heavy thinning will be required.

Jerseyland—ripens about one week ahead of Golden Jubilee. The fruit is very dark red, yellow-fleshed and firm for an early peach. Reported as a freestone in New Jersey but clings at Geneva unless dead ripe. As hardy in bud as Redhaven and about the same season.

Kalhaven—is an attractive medium sized, yellow-fleshed, freestone ripening about four days before Elberta. The quality is good and the flesh is firm enough to stand handling well. The variety sets fruit heavily and must be carefully thinned.

Loring—is a large, attractive highly colored peach, ripens about 2½ weeks before Elberta or about with Veteran. The flesh is yellow, firm, slightly fibrous and juicy. The flavor is sweet and rich and the quality is good. It is a freestone. The tree is vigorous and productive. This is one of the best varieties ripening between Halehaven and Elberta.

Merrill 49'er—is a large attractive, yellow fleshed freestone ripening in a season one week before Elberta where a good peach is badly needed. The quality of this variety is the best, being firm and juicy with a sweet rich flavor. This variety looks very promising and merits a trial in the East.

New York 1466—is a productive large peach which ripens about 3 days before Red Rose or about 3½ weeks before Elberta. This roundish peach averages about 80% bright red blush over a creamy undercolor. The flesh is white, juicy, fine grained and fairly firm. The flavor is sweet and rich, the quality equal to the best white fleshed peaches. It is freestone. The tree is vigorous, spreading and hardier than Redhaven. It is recommended for trial in the home garden or anywhere there is a market for a white-fleshed peach.

New York 1952—is a productive good sized highly colored peach ripening just ahead of Fairhaven or about 3½ weeks before Elberta. The flesh is yellow, smooth textured, juicy, and fairly firm. The flavor is sweet and rich and the quality is good. This variety is quite hardy. It will overbear if not thinned adequately.

New York 2602—(Valiant × Veteran) is a large yellow fleshed clingstone, ripening six weeks before Elberta or just before Dixired. The fruit is covered with a dark red blush. The flesh is reasonably firm for such an early variety and the flavor is excellent. The quality is better than Dixired in all respects. It is slightly hardier than Redhaven.

New York 2604—(Valiant × Veteran)—is a large attractive yellow fleshed peach ripening about five and one-half weeks before Elberta, or nearly a week before Redhaven. This variety is about 70% covered with a red blush over yellow. The flesh is moderately firm, juicy, slightly coarse and very

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good quality for its season. It is a freestone in some years and semi-cling in others. It is about as hardy as Redhaven.

Oriole—is in season about four weeks before Elberta. The tree is vigorous and productive. The fruit is medium to large in size, roundish, yellow, very good in quality, and a freestone. Its flesh has a greenish tinge that impairs its appearance. Oriole is notable for its hardness.

Prairie Dawn—is an early yellow-fleshed clingstone ripening nearly six weeks before Elberta, or more than a week before Redhaven. It is mostly yellow with attractive red blush and stripes. It is moderately firm, juicy and slightly coarse. The flavor is good. It is one of the hardiest yellow fleshed peaches and is vigorous and productive.

Raritan Rose—is a white-fleshed freestone peach. The fruit is large and round-oval in shape. It is well washed with red color and attractive. The flesh is of good quality and considerably firmer than that of Cumberland which it is designed to replace. It ripens a few days before Golden Jubilee. The tree is productive and hardy.

Redglobe—is a medium sized, attractive peach which ripens with Burbank July Elberta or about 3 weeks before Elberta. It is round in shape and about $\frac{3}{4}$ covered with bright red blush. The flesh is yellow, very firm and smooth in texture. The flavor of this freestone variety is good. This peach has not fruited at Geneva. The tree is reported to be vigorous and productive.

Redhaven—is a highly colored, yellow-fleshed, freestone peach ripening a few days before Golden Jubilee or about with Oriole. It has good fruit quality and its flesh is very firm for an early peach. The trees set heavy crops and require early and thorough thinning or undersized fruit may result. The tree is vigorous and hardy. Redhaven is very slow to oxidize and excellent for freezing.

Redrose—is another white-fleshed peach. The fruit, which ripens about ten days after Raritan Rose or just before Halehaven, is of good size, highly colored and of firm texture. Its quality is far superior to other white-fleshed peaches ripening in its season or earlier. This is a very productive variety.

Redskin—is medium sized, highly colored, and an attractive peach which ripens just before Elberta. The flesh is yellow, firm and good quality. It is a freestone. This variety is replacing Elberta somewhat for fresh fruit purposes in that season, but it requires heavy thinning for good size.

Richhaven—has not fruited at Geneva but is described by its originator Stanley Johnston as resembling Halehaven. It is larger, has a brighter more attractive color and firmer flesh. It ripens with Halehaven. It is freestone even when firm ripe. The tree is large and productive.

Royal Vee—is a medium sized all-over red peach ripening 3-4 days before Sunhaven, or about $6\frac{1}{2}$ weeks before Elberta. The flesh is bright yellow,

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fairly firm, slow oxidizing and of good flavor. It is a semi-freestone which becomes free at full maturity in most years. Royal Vee has not fruited at Geneva, but is reported to be very productive and to require heavy thinning.

Sunhaven—is another of Stanley Jonston's originations, described as resembling Redhaven and ripening ten days earlier. It is medium to large in size, bright red in color and nearly free of pubescence. It is a partial clingstone until fully ripe. The tree is productive and vigorous.

Sunhigh—is a large, highly-colored, bright, firm, smooth peach which ripens a few days before Halehaven. It is a freestone with attractive yellow flesh and its quality ranks among the best of the new peaches recommended for trial in New York. It is as hardy as Elberta.

Triogem—is a yellow freestone peach, oval in shape and ripens about two days after Golden Jubilee or four weeks before Elberta. The fruit is highly colored, has short pubescence and is very attractive. The flesh is firm and the variety stands handling much better than Golden Jubilee in addition to having much better quality. The trees are productive and require thorough thinning. Triogem is very good for freezing.

Veteran—is a large oval, good quality peach, ripening about two weeks before Elberta and nearly a week after Halehaven. It is an attractive yellow covered with about 50% red blush. It is somewhat clingstone in most years. The quality of the flesh is very good, being firm and juicy with a sweet rich flavor. Veteran freezes very well. It is one of the hardiest yellow-fleshed peaches and is very productive.

Washington—is a productive, large, attractive peach ripening about 3 days after Triogem or about 3 weeks before Elberta. It has outstanding firmness but melting and juicy flesh. The quality and flavor are very good. It is a freestone. This peach has not fruited at Geneva but it is reported to be especially resistant to injury from late spring frosts.

APRICOTS

Not all apricots are self-fruitful and it is generally recommended that two varieties be planted. The varieties listed here however, will set fruit if planted alone.

<i>Parentage</i>		<i>Where Orig.</i>	<i>Year Introd.</i>
New York 345	(Doty × Geneva) open pollinated	N. Y. Sta.	—
New York 346	(Doty × Geneva) " "	"	—
New York 477	unknown	—	—

N. Y. 345 (Doty × Geneva) open pollinated—is a hardy, productive, good quality apricot. The tree is vigorous. The fruit ripens in the last week of

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July at Geneva, is medium in size, roundish and is an attractive bright orange color with a slight blush. The flesh is firm, fine grained and juicy. The flavor is sweet and rich. It is a freestone. This apricot blooms early but appears to have a measure of resistance to injury from frosts at time of bloom. This apricot with its sister, N. Y. 346, has been the most regular in bearing of any apricots under test. It is self-fruitful.

N. Y. 346 (Doty $\times$ Geneva) open pollinated—is very similar to N. Y. 345 but is probably best described by mentioning how it differs from that variety. The tree is slightly more vigorous. The fruit averages slightly larger in size, is softer and drops more readily. The average date of bloom and maturity is one day later. It is apparently slightly more resistant to spring frost injury than N. Y. 345 but they have been practically the same as far as regular bearing is concerned. N. Y. 346 too is self-fruitful.

New York 477—is a large orange apricot with a blushed cheek which ripens in the second week of August at Geneva. The flesh is smooth, juicy and quite firm. The flavor is good and it is freestone. The tree is hardy and productive. This apricot was brought to our attention by Mr. W. L. Palmer of Williamson, N. Y. who has a very large tree growing in his yard. This tree, which might be as old as 50 years, has borne fruit every year but two in the 17 years he has known it. There is a good possibility that this is a named variety because two other trees of the same kind and same general age were found later in the Sodus area. In view of its regular bearing, size and quality, it was decided to make this apricot available through the Association, but until it can be identified, it is being released under the temporary designation of New York 477.

P E A R S

To insure a full crop of pears, two or more varieties should be placed close together. Furthermore there are a few varieties which do not produce good pollen. Alexander Lucas is the only pear of this type in the following list.

There is an increasing demand for dwarf pears which are compatible with the rootstock. The Association is now offering some varieties on quince roots, using Old Home or Hardy as interstock.

EARLY PEARS	Parentage	Where Orig.	Year Introd.
Chapin	Seckel (open pollinated)	N. Y. Sta.	1946
Early Seckel	“ “	“	1935
Dawn	Mich. U. S. 437 $\times$ Comice	USDA Beltsville	1960
New York 7620	Bartlett $\times$ Marguerite Marillat	N. Y. Sta.	—
Moonglow	Comice $\times$ Ree Carlotta Wurtemberg	USDA Beltsville	1960

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MID-SEASON	Parentage	Where Orig.	Year Introd.
New York 4885	Bartlett × Ewart	N. Y. Sta.	—
Magness	Seckel Sdlg. × Comice	USDA Beltsville	1960
Gorham	Bartlett × Josephine deMalines	N. Y. Sta.	1923
Maxine	Unknown	Ohio	1870
Ewart	Unknown	"	1917
LATE			
Beurre Dumont	Unknown	European	—
Alexander Lucas	"	France	—

Alexander Lucas—an attractive French pear that has never been widely disseminated in America. It is fairly productive and is first ripe the end of October and will store until December. The fruit is large, smooth, obtuse pyriform and bright yellow in color with an occasional blush. The flesh juicy, melting and smooth. The flavor is sweet, mild and refreshing. This variety does not produce good pollen and must be grown with two other varieties.

Dawn—is a medium sized pear ripening about two weeks ahead of Bartlett. It is smooth, pyriform in shape and greenish yellow with a dull blush. The flesh is smooth and juicy. The flavor is sweet and spicy and the quality is very good. Dawn has not fruited at Geneva, but the tree is reported to be moderately vigorous and upright in habit. It is probably no more blight resistant than Bartlett.

Dumont—another old European variety that has not been widely tested in America. This variety is productive but tends to alternate bearing on old trees. Dumont ripens in the last two weeks of October and will store until the end of December. It is medium to large in size, obtuse pyriform in shape and an attractive yellow with a slight blush in color. The flesh is firm, juicy and smooth in texture and the flavor is sweet and rich. This is one of the best quality winter pears.

Chapin—resembles its parent Seckel somewhat and ripens six weeks earlier. The fruit is small to medium in size and pyriform in shape. It has an attractive red blush. The flesh is juicy, melting and smooth and the flavor is sweet and aromatic, quality is excellent. It can be picked over a two week period in early August at Geneva. The tree is vigorous and productive but slow in coming into bearing. It has promise as a home garden or roadside stand variety.

Early Seckel—is exactly what its name implies—an early-ripening Seckel. The season is from 2 to 3 weeks ahead of Seckel but in cold storage the fruit can be kept longer than Seckel. The variety closely resembles Seckel in appearance and flavor, having the same delectable taste. It is unsurpassed for local and roadside markets.

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Ewart—comes from Mortimer Ewart, East Akron, Ohio. The fruit is remarkable for its large size and good quality. It is greenish yellow, netted with russet, and has a fine, melting, tender, juicy flesh. The season is a month later than Bartlett.

Gorham—ripens its fruit 2 weeks later than Bartlett and keeps a month longer. The fruits resemble those of Bartlett in size, color, and shape. The flavor is sweet and vinous with a very marked and pleasing aroma. The flesh is white, tender, buttery, and juicy—a combination which, with the rich flavor and spicy aroma, makes this one of the very best-flavored pears of its season. Recommended for dessert and canning. Requires heavier feeding than Bartlett for best production.

Magness—is a medium sized pear ripening about a week after Bartlett. It is greenish, covered with light russet, and is short pyriform in shape. The flesh is soft, juicy, and almost free of grit cells. The flavor is sweet, highly perfumed and aromatic and the quality is high. It will store up to three months. Magness has not fruited at Geneva, but the tree is reported to be very vigorous and spreading. It is somewhat thorny. Magness is very resistant to blight. It does not produce good pollen and must be planted with two other varieties if all are to set fruit.

Maxine—has the best quality of the fire blight resistant varieties. It is productive and ripens from late September through October. The fruit is large, attractive yellow with a flesh which is slightly coarse, juicy, sweet mild flavor and of fair quality.

Moonglow—is a large, attractive pear which ripens about two weeks before Bartlett. The flesh when ripe is rather soft, moderately juicy, and nearly free of grit cells. The flavor is mild subacid and rated good. Moonglow has not fruited at Geneva, but the tree is reported to be upright in growth and heavily spurred, producing at an early age. It is very resistant to fire blight.

New York 4885—(Bartlett × Ewart)—A large productive pear of the Bartlett type that ripens a little later. The flesh is white, fine grained, tender and juicy. The flavor resembles Bartlett but is not quite as good.

New York 7620—(Bartlett × Mauguerite Marillat)—A high quality summer pear. It is productive and the fruit is of good size. It is an attractive yellow in color overlaid with some light russet. The flesh is fine, melting and juicy with a sweet and aromatic flavor.

DWARF PEARS

Pear trees are dwarfed when grown on a quince root system. However, certain varieties are not compatible to these stocks. To overcome this, the Association is using a compatible interstem thereby making it possible to produce a strong dwarf pear tree.

A CATALOG OF NEW FRUITS

JAPANESE PLUMS

The Japanese varieties are mostly early, soft and juicy.

Nearly all Japanese varieties require cross-pollination. At least two different ones should be planted to insure a crop. Formosa has been reported to have pollen of low germinability and should not be selected as a pollinizer.

	<i>Parentage</i>	<i>Where Orig.</i>	<i>Year Introd.</i>
Formosa	Japanese	Burbank	1907
Santa Rosa	"	"	1906

Formosa—is a Japanese plum recommended for its large attractive fruits. The plums are oval to slightly cordate, greenish yellow nearly overlaid with red; flesh firm, juicy, melting, pale yellow, sweet and good; stone slightly clinging; ripens in midseason. Tree is a biennial bearer.

Santa Rosa—is one of Burbank's noteworthy Japanese plums which in nearly all characters of tree and fruit surpasses Abundance and Burbank. The tree is a prolific bearer, and the large attractive fruits keep and ship well. Santa Rosa is one the best Japanese plums on the grounds of the Experiment Station at Geneva.

EUROPEAN PLUMS

The European plums make up the most important group and include the greatest variety of types and the highest quality sorts that we have.

Many European plums require cross-pollination. Even the varieties that are classed as self-fruitful may produce better crops when cross pollination is provided.

The Association is making Stanley available on a compatible interstock to avoid plum decline common with Stanley.

	<i>Parentage</i>	<i>Where Orig.</i>	<i>Year Introd.</i>
EARLY			
New York 929	Tragedy × Early Laxton	N. Y. Sta.	—
New York 930	Tragedy × Early Laxton	"	—
California Blue	Peach (open pollinated)	Calif.	1909
DeMontfort	Unknown	European	—
MID-SEASON			
New York 858	Unknown	N. Y. Sta.	—
Early Transparent Gage	Transparent Gage Seedling	Eng. about	1866
New York 981	Italian Prune × Prinlew	N. Y. Sta.	—
Yakima	Unknown	Wash.	1922
Green Gage	"	France?	—
Reine Red	Reine Claude red sport	Idaho	1951
Pacific	Unknown	—	—
Hall	Golden Drop × Grand Duke	N. Y. Sta.	1923
Imperial Epineuse	Unknown	European	—
Stanley	Agen × Grand Duke	N. Y. Sta.	1926
French Damson	Origin unknown	France	—

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<i>Variety</i>	<i>Parentage</i>	<i>Where Orig.</i>	<i>Year Introd.</i>
LATE			
New York 826	Albion × Italian Prune	N. Y. Sta.	—
Sannois	European	European	—
Golden Trans. Gage	Transparent Gage seedling	England	1894

California Blue—An early-ripening, large, roundish, attractive purple freestone plum. Good in quality. Worthy of trial for home and early markets.

De Montfort—An old French, blue plum highly regarded by lovers of high-quality fruit. Fruit medium in size, roundish oval, and dark purple; flesh juicy, sweet, rich; freestone. Season late August.

Early Transparent Gage—A dwarfish, compact and productive tree. Fruit medium size, yellow-green with red dots and a light bloom. An attractive freestone, juicy, very sweet plum with the highest flavor. It is early and ripens over a long period making it particularly desirable for home gardens.

French Damson—one of the largest of the Damson plums. It is productive and vigorous, producing fruit about 1¼" in diameter with Damson tartness that is desirable for use in preserves.

Golden Transparent Gage—A choice, late dessert plum. Fruit is clear golden-yellow with a number of small red dots. Flesh firm, very sweet with rich Gage flavor. The tree is dwarfish in habit.

Green Gage—has been cultivated in France for many hundred years. Fruit is medium small, yellowish-green, mottled with red. It is considered in Europe to be the ideal dessert plum, rich in flavor with tender, juicy and melting flesh. A delight to eat, it is unsurpassed for dessert and other uses.

Hall—is a large, blue plum. The fruits are attractive and well flavored. Tree is productive and dwarfish in size. Requires pollinator.

Imperial Epineuse—is an old French prune. Fruit is reddish purple, tender, sweet, juicy, and highly flavored. Requires cross-pollination.

New York 826—(Albion × Italian Prune)—A late reddish black prune-type plum to follow Stanley that appears to be an improvement over Albion.

New York 858 (Unknown parentage)—A Mirabelle type, small, yellow, freestone. Appears to be slight improvement over American Mirabelle because it is a freestone and is more productive. This type is very desirable for jams and preserves.

New York 929 (Tragedy × Early Laxton)—A productive early, reddish purple domestica type plum that is slightly earlier than Early Laxton. We believe it is an improvement over that variety.

New York 930—(Tragedy × Early Laxton)—A very early, black, prune-type plum of good quality. It ripens in mid August.

New York 981—(Italian Prune × Prinlew)—A large, attractive, reddish blue

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dessert type plum ripening in midseason that may have value as fresh fruit.

Pacific—is a handsome, large, bluish, freestone prune-type plum of excellent quality. It is somewhat unreliable in cropping but outstanding in appearance and quality.

Reine Red (Red Gage)—This similar in all respects except color to the Reine Claude plum. It is an attractive red, ripening about the second week of September at Geneva.

Sannois—is a late reddish purple French plum of medium size. It is one of the sweetest and most delectable varieties of all the plum family. Recommended for the home garden.

Stanley—The fruit is of the prune type, excellent for cooking or eating out of hand. The tree is hardy, healthy, vigorous, and produces full crops annually. The fruit is large in size, dark blue with thick bloom; flesh greenish yellow, juicy, fine-grained, tender, firm, sweet, pleasant; quality good; stone free; midseason. This variety is replacing the Italian Prune in the Northeast.

Yakima—a very large, prune-shaped, purplish red, freestone, good quality plum. Tree is vigorous and upright.

GRAPES

The Geneva Experiment Station has introduced over 25 varieties of grapes. Many of them have proved of merit in New York State and in other grape-growing areas throughout the United States. Some of the most promising seedlings have been found too tender to withstand test winters that occasionally occur, or too susceptible to certain diseases as the mildews and black rot. Reports on the performance of any of the introductions is solicited for it forms the basis of our recommendations.

GRAFTED GRAPES

We are becoming increasingly aware of the probable destructive action of certain soil inhabiting organisms on the roots of many of our grape varieties. For this reason the Association has undertaken to propagate and distribute the more susceptible varieties on phylloxera resistant rootstocks. These grafted grapes will usually give more vigorous vines and hence be more productive than self rooted vines. This is especially true if planted on old vineyard sites or near established grapes.

All grafted vines are not equally adapted to all soils. We suggest stock 3306 for heavy textured soils and 3309 for sandy and gravelly soils. The varieties available on these stocks are listed in our price list.

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	<i>Parentage</i>	<i>Where Orig.</i>	<i>Year Introd.</i>
VERY EARLY			
Schuyler	Zinfandel × Ontario	N. Y. Sta.	1947
Interlaken Seedless	Ontario × Thompson Seedless	"	1947
Himrod	Ontario × Thompson Seedless	"	1952
Van Buren	Fredonia × Worden	"	1935
New York 30454	S. V. 5-276 × N. Y. 13911 (Zinfandel × Ontario)	"	—
Ontario	Winchell × Diamond	"	1908
New York 15305	Ontario × Thompson Seedless	"	—
Seneca	Lignan Blanc × Ontario	"	1930
Seibel 5279	French Hybrid	France	—
Seibel 13047	" "	"	—
Seibel 13053	" "	"	—
Foche	French Hybrid (Kuhlmann 188-2)	"	—
EARLY			
Athens	Hubbard × Portland	N. Y. Sta.	1938
New York 18080	N. Y. 10842 × Sultana	"	—
Buffalo	Herbert × Watkins	"	1938
Kendaia	Portland × Hubbard	"	1939
Fredonia	Champion × Lucille	"	1927
Giant Fredonia	Tetraploid Fredonia	—	—
Seibel 1000	French hybrid	France	—
MID-SEASON			
Romulus	Ontario × Thompson Seedless	N. Y. Sta.	1952
New York Muscat	Muscat Hamburg × Ontario	"	1961
Concord Seedless	Concord sport ?	"	—
Bath	Fredonia × Sta. 10805 (Chasselas Rose Violet × Mills)	"	1952
Seibel 9110	French hybrid	France	—
Seibel 5898	French hybrid	"	—
Giant Concord	Tetraploid Concord	—	—
New York 12128	Muscat Hamburg × Wayne	N. Y. Sta.	—
Baco No. 1	French Hybrid	France	—
Seyve Villard 5-276	" "	"	—
Canada Muscat	Muscat Hamburg × Hubbard	N. Y. Sta.	1961
Seibel 4986	French Hybrid	France	—
Seibel 10878	" "	"	—
Seibel 10868	" "	"	—
Alden	Ontario × Grosse Guillaume	N. Y. Sta.	1952
New York 14528	Muscat Hamburg × Hubbard	"	—
Steuben	Wayne × Sheridan	"	1947
Naples	Delaware × (Mills × Iona)	"	1952
LATE			
Sheridan	Herbert × Worden	N. Y. Sta.	1921
New York 15302	Ontario × Thompson Seedless	"	—
Yates	Mills × Ontario	"	1937
Golden Muscat	Muscat Hamburg × Diamond	"	1927

Alden—resembles its European parent in the fruit. It has large meaty berries with the non-slipskin character of European grapes. Vine vigorous; clusters large, loose; berries oval, reddish black; quality good. Crop must be controlled by short pruning or cluster thinning.

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- Athens**—is a hardy, vigorous and productive Concord-type grape that ripens two or more weeks before Concord. Bunches are large and loose; berries larger than Concord, black with a heavy bloom; skin tender, flesh sweet and of good quality.
- Bath**—is an attractive black, very productive introduction worthy of trial for fresh fruit and processing. The vine appears to be as hardy as Concord. The berries are juicy, sweet and of pure flavor. Severe pruning or cluster thinning is necessary to prevent overbearing.
- Buffalo**—is considered by most to have the highest dessert quality of the early black grapes. The vine is very vigorous and productive. The berries are slipskin, juicy, very sweet, spicy-tart, and vinous.
- Canada Muscat** (N. Y. 17806)—late midseason, fine white muscat with medium production. Of interest in grape district of eastern Canada for a white Muscatel wine.
- Fredonia**—is a good quality black grape that ripens two weeks before Concord. More vigorous and more productive than Concord under most conditions. Too severe pruning may result in poor berry set. It is our leading early black grape.
- Giant Concord**—is a large berried bud sport of Concord. It has twice the normal chromosome number, a tetraploid with 76 chromosomes in all but the outer single layer of cells. Probably without commercial value but an interesting curiosity.
- Giant Fredonia**—like the Giant Concord, a large berried bud sport with similar chromosomal makeup. Berries are very large.
- Golden Muscat**—A beautiful golden yellow grape that ripens with Catawba. The clusters are large and compact, berries large, juicy and of excellent quality when well ripened.
- Kendaia**—is another early black Concord-type grape that ripens with Athens. It is very vigorous and productive. This grape is well suited to a local early basket trade.
- McC Campbell**—submitted for trial by Sara McC Campbell of Holmdel, N. J. Reported as a bud sport of Fredonia. Differs in having very large, fine clusters, two or three times normal in size. Should be tried for possible commercial value, especially as a basket grape.
- Naples**—is a beautiful red grape that resembles its parent, the Delaware, in fruit quality but ripens two weeks later. The clusters are larger and less compact, the berries are larger and have a tougher skin.
- New York Muscat** (N. Y. 12997)—Sweet, pleasing, with rich muscat flavor, of excellent quality. Reddish black to black. Ripens in early midseason, with Delaware. Makes a pleasing red Muscatel wine, the flavor a blend of true muscat and American fruitiness.

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New York 12128 (Muscat Hamburg $\times$ Wayne)—a midseason, reddish black muscat of the highest eating quality, beautiful clusters. Tends to overbear and may not be fully hardy in the most severe winters. Prune short.

New York 14528 (Muscat Hamburg $\times$ Hubbard)—late black muscat of high quality.

New York 18080 (N. Y. 10842 $\times$ Sultana)—a handsome black midseason dessert variety. Should be tried for roadside market.

New York 30454 (S. V. 5-276 $\times$ N. Y. 13911 (Zinfandel $\times$ Ontario))—very early, white, European type, ripens with Ontario.

Ontario—is the best early American-type white grape. It ripens two to three weeks before Niagara. The vines are vigorous and productive.

Schuyler—is a very early black, high quality, very sweet grape, with a vinous tang. The berries are more the European type and do not have the slipskin character. Schuyler is medium hardy, productive and vigorous. It must be pruned very severely to avoid overbearing.

Seneca—is an early white grape predominantly European in fruit characters. It is our outstanding white dessert grape. The berry texture is firm, the skin may be eaten with the berry. The flavor is sweet, vinous and aromatic. The vine is vigorous, productive and medium winter hardy. Good maturity of canes through proper mildew control is necessary to ensure maximum hardiness of wood.

Sheridan—is a good late-keeping black grape to extend the season of Concord. The vine is vigorous, healthy, hardy and productive; the clusters large and compact. Sheridan is an excellent variety in locations where it ripens properly.

Steuben—is the most promising of the recent introductions and has commercial possibilities for Eastern growers. The bluish-black fruit ripens shortly after Concord. Clusters are long, tapering and compact. Flavor is sweet with a distinctive spicy tang. The vines are vigorous, hardy and productive.

Van Buren—The best very early Concord-type black grape. It is outstanding for its vigor, productiveness and good eating quality. Must be protected against mildew.

Yates—is a good late red grape that stores very well. Vine is vigorous, productive; clusters large, conical, medium compact; berries large, attractive, medium red; flesh juicy, nearly melting, sweet, vinous, pleasing, good.

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SEEDLESS GRAPES

The late A. B. Stout, formerly with the New York Botanical Garden, co-operated for over 30 years with the New York State Agricultural Experiment Station in the breeding of seedless grapes. One of the best of the seedless parents was found to be Sultanina (Thompson Seedless of California). Stout Seedless, the first to be introduced, has been discontinued as it was frequently winter injured. Sultanina crossed with Ontario gave the Interlaken Seedless, Himrod and Romulus.

Concord Seedless—probably a sport of the Concord. Fruit resembles Concord in color and flavor but the clusters and berries are small. Occasionally seed is present but usually berries are seedless. Highly regarded by many as a pie grape.

Himrod—a sister seedling of Interlaken Seedless, ripening slightly later. Its clusters are large and rather loose; berries medium, oval, sweet, yellow, vinous and good. Variety being sent out for trial as its vine has been hardier than Interlaken Seedless and its clusters larger.

Interlaken Seedless—is a promising seedless grape for the eastern United States. Its medium sized clusters are well filled with berries about the size of Delaware. The fruit ripens to a rich golden yellow color. At Geneva it ripens about September 1 or a full month before Concord. The fruit is very sweet and the flavor blends that of Ontario and Thompson Seedless. The flesh is meaty and crisp and adheres to the skin. The vine compares favorably with that of Golden Muscat, Seneca, and Delaware in hardiness. Temperatures of -20°F may be expected to injure the wood of Interlaken Seedless.

New York 15302—is another white "seedless" sister of Interlaken, Himrod and Romulus. It has large, well filled clusters; berries are medium and above in size; the quality is good; seeds are somewhat noticeable.

New York 15305 (Ontario $\times$ Thompson Seedless)—another early white seedless of excellent quality. Has lacked vigor under some conditions.

Romulus—another sister ripening about two to three weeks later than Interlaken Seedless. Vine productive; clusters large, compact; berries small, yellow, sweet vinous non-foxy flavored, quality good.

FRENCH HYBRID GRAPES

These Hybrids have been originated in France by crossing the classic European varieties with certain American species. The French breeders have aimed to combine the excellent wine and table fruit quality of the European *Vitis vinifera* with the hardiness and disease resistance of the wild American species. Most of the Hybrids have no names but are identified by the name of the hybridizer and a number. A great many different numbers have been tested. The Association is offering a selection of those that have attained good maturity in tests in New York State and that appear to offer most promise for wine, juice and jelly, as well as for table use.

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- Baco No. 1**—extremely vigorous and disease resistant vine. Long clusters of small black berries. Used commercially in red table wines. Good for jelly and juice. Makes a beautiful trellis or arbor. Should be pruned to long canes.
- Foche (Kuhlmann 188-2)**—an extra early variety producing an outstanding Burgundy-type red wine without blending, perhaps the best in quality of those we have grown. Clusters and berries of medium size, black. Vines are vigorous. Long pruning recommended.
- Seibel 1000**—One of the first French hybrids grown in New York. Vines hardy, moderately productive, makes a quality white or rose wine. Again listed because of numerous inquiries for vines.
- Seibel 4986**—a healthy vine with good production. Handsome clusters of medium size, golden. Produces a high quality white wine. Should be pruned to short canes or spurs.
- Seibel 5279**—is a very early, white-pinkish, delicious grape for eating. Vigorous and one of the hardiest and most productive of all we have tested. Also a leading wine variety, producing an excellent, delicate white table wine.
- Seibel 5898**—hardy, good producer. Ripens with Concord. Makes a blending wine with good red color.
- Seibel 9110**—is on the best locations a beautiful yellow gold dessert type grape. It also produces a delicate white wine. May not be fully hardy under extreme conditions and should not be allowed to over produce.
- Seibel 10868**—has been planted commercially for white table wines of the Chablis type. Vigorous vines yield reliable crops of handsome pinkish berries in Concord season. Should be pruned to spurs or short canes.
- Seibel 10878**—healthy, vigorous, productive vines. Clusters are large, berries medium, black. Has been widely planted in some areas for wine. Makes a very good red table wine. Prune to short canes. Season shortly before Concord.
- Seibel 13047**—an early, productive white grape for the table. It also produces a good quality, neutral white wine.
- Seibel 13053**—a very early blue, vigorous, hardy and productive. Produces a superior rosé wine which blends well with varieties like Baco No. 1 and Foche. Prune to short canes.
- Seyve-Villard 5-276**—is a midseason white variety of medium vigor and good disease resistance. It makes a superior white wine of the finest quality. Requires short pruning.

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BLUEBERRIES

The following varieties are recent U.S.D.A. introductions. They have been selected for large size of berry, better quality and higher yield. More extensive trials are needed under varied conditions for their complete evaluation, but they appear to be superior to the older varieties.

EARLY	Parentage	Where Orig.	Year Introd.
Earliblue	Stanley × Weymouth	U.S.D.A.	1952
MID-SEASON			
Collins	Stanley × Weymouth	U.S.D.A.	1959
Blueray	G.M. 37 (Jersey × Pioneer) × C.U.-5 (Stanley × June)	"	1955
Bluecrop	G.M. 37 (Jersey × Pioneer) × C.U.-5 (Stanley × June)	"	1952
Berkeley	Stanley × G.S.-149 (Jersey × Pioneer)	"	1949
LATE			
Herbert	Stanley × G.S. 149 (Jersey × Pioneer)	"	1952
VERY LATE			
Coville	G.M. 37 (Jersey × Pioneer) × Stanley	"	1949

Berkeley—has the largest berry of all and is good in quality. It ripens 15 days after Earliblue. The bush is very vigorous, spreading and productive.

Bluecrop—ripens 13 days after Earliblue. It should be tried because of its unusual productiveness, its attractive color, firmness and high quality. It may overbear unless properly pruned.

Blueray—is a productive second-early, ripening about one week after Earliblue. The plants are exceptionally vigorous and the berries are very large, firm, light blue and highly flavored. Recommended for trial for northeastern states.

Collins ripens midway between Earliblue and Blueray, filling the gap in the ripening season of large fruited varieties. The plants are erect, vigorous and moderately productive. The fruit is borne in medium-sized rather tight, attractive clusters. The berries are as large as Earliblue, firm, light blue in color and are highly flavored with sweet to mildly subacid taste. The fruit does not drop nor has it cracked to date.

Coville—is the latest of all to ripen, coming 30 days after Earliblue. The bush is very vigorous, producing heavy crops of large berries. The quality is good when fully ripe.

Earliblue—one of the earliest to ripen and superior to Weymouth in vigor, size, color, firmness and quality of fruit. It should be tried by all who want an extra early variety.

Herbert—ripens 25 days after Earliblue and just after Jersey. It is promising as one of the best in size, firmness, quality and productiveness for a late variety.

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RASPBERRIES

The Station has introduced several new raspberries which in some respects are definitely superior to the standard sorts in the trade. All of the following are offered as well worthy of trial for the purposes indicated.

B—black, P—purple, R—red, Y—yellow

	<i>Parentage</i>	<i>Where Orig.</i>	<i>Year Introd.</i>
VERY EARLY AND FALL BEARING			
September R	Marcy × Ranere	N. Y. Sta.	1947
MID-SEASON			
Newburgh R	Newman × Herbert	N. Y. Sta.	1929
New York 30001 B	Bristol × Cumberland	"	—
Sodus P	Dundee × Newburgh	"	1935
Bristol B	Watson No. 1 × Honeysweet	"	1934
New York 29878 B	Bristol × Dundee	"	—
New York 27189 B	Rachel × Dundee	"	—
Dundee B	Smith No. 1 × Palmer	"	1927
Taylor R	Newman × Lloyd George	"	1935
LATE			
Clyde P	Bristol × N. Y. 17861	N. Y. Sta.	1961
Marion P	Bristol × (Newman × Herbert)	"	1937
Milton R	Lloyd George × Newburgh	"	1942
Amber Y	Taylor × Cuthbert	"	1950

BLACK RASPBERRIES

Bristol—has become a leading variety in the Finger Lakes area of New York and is being planted extensively in other sections. The berries are large, firm, glossy, attractive, good in quality, and ripen in midseason. The plants are hardy, vigorous and productive.

Dundee—has with Bristol also become one of the principal varieties in the Finger Lakes area. Dundee is a little later than Bristol, slightly less glossy and somewhat better in quality, being one of the best in this respect. The plants are as vigorous and productive. Dundee is considered to be somewhat more tolerant of imperfect drainage than Bristol, although it should not be planted on poorly drained soils.

New York 27189 (Rachel × Dundee) and **New York 29878** (Bristol × Dundee)—These are both promising for vigor, productiveness, size and quality of fruit. Winter injury and anthracnose have not been serious. N. Y. 29878 is slightly earlier than the other. Both are worthy of trial for market and home use. Grower evaluation is needed to determine their value.

New York 30001—(Bristol × Cumberland)—This was selected from a Station seedling planting by Herbert Allen, Rock Stream, N. Y., by whom it has

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been tested extensively. It is slightly earlier than Bristol and bears large attractive berries. Mr. Allen states that a high percentage of the crop can be harvested with the first picking, and on his farm he considers it superior to other varieties.

RED RASPBERRIES

Milton—is a fine late variety for market and home use. It is one of the best for freezing. The berries are large, long conic, bright medium red, firm, of good quality, ripening two or three days later than Taylor and Latham. Plants are tall, vigorous, productive, hardy and remain free from mosaic.

Newburgh—introduced in 1929, soon became a leading market variety by virtue of its large, firm berries and very productive plants which do not become infected with mosaic as rapidly as Latham in central and western New York. Flavor is mild and quality fairly good. Newburgh ripens three or four days before Latham.

September—is the finest available autumn fruiting raspberry. The autumn crop starts about September 1, or nearly a month earlier than Indian Summer. September is also an excellent extra early summer fruiting variety, with the first picking usually coming in late June. The berries are medium size in the summer and large in the fall. They are unusually firm, bright red, good quality in the summer and very good in the fall. The crops are satisfactory and the plants escape mosaic. September is well established for home use. It is also suitable for commercial planting for its very early summer crop.

Taylor—is an excellent variety for market and the home garden. The plants are tall, vigorous, hardy, and productive. The sturdy canes do not need support. The berries are large, long conic, firm, medium red, attractive, of excellent quality, ripening about with Latham. Taylor is a fine variety.

Amber—is the sweetest, best flavored raspberry now available for home use. The berries are large, long conic, moderately firm and are the color of light honey. Amber is the last to ripen, being even later than Milton. The plants are very vigorous, productive and hardy at Geneva.

PURPLE RASPBERRIES

Clyde (N. Y. 245)—This is a promising new purple raspberry for trial for market and home use. It has been a consistently good performer since its origin. The plants are vigorous and bear heavy crops. Winter injury has been slight and the stand uniformly good. The purple raspberries are not widely grown but their vigor and reliably heavy crops of berries very suitable for culinary use make them a valuable home garden fruit. In New York State they are a good market berry. Very little anthracnose has been noted on the plants since the variety originated. The berries are large, slightly darker than medium purple, attractive, firm, coherent, tart and

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good in quality. The crop begins ripening from July 12 to 23 depending on the season, usually about with Marion.

Marion—introduced in 1937, as a very large, late, purple raspberry to follow Sodus. The berries are very large, holding up well in size through the season, moderately juicy, firm, tart, and good in quality. They tend to cling to the bushes, but not sufficiently to be seriously objectionable. Marion ripens about a week later than Sodus and will serve to prolong the season for berries of that type. The plants are vigorous, bear heavy crops, are hardy and resemble the red raspberry more than the black raspberry in appearance. Propagation is by tip layering although a few suckers are produced.

Sodus—this variety is the most promising new purple raspberry on the Station grounds. It originated from the cross between the Dundee black raspberry and the Newburgh red raspberry. The berries are very large, firm, medium purple in color, sprightly and good in quality. The plants are very vigorous, very productive, and hardy. Sodus is more resistant to drought than Columbian and yields a good crop every year. It ripens shortly after Latham. This variety has replaced the Columbian, our former standard variety.

BLACKBERRIES

Blackberry varieties that are available have been generally unsatisfactory. These three new varieties, as grown at Geneva, appear to have sufficient merit to warrant their introduction for more extensive trial for market and home use.

<i>Variety</i>	<i>Parentage</i>	<i>Where Orig.</i>	<i>Year Introd.</i>
Darrow	15826 (Eldorado × Brewer) × Hedrick	N. Y. Sta.	1958
Hedrick	Eldorado × Brewer	"	1950
Bailey	Unknown	"	1950

Hedrick—Plants are vigorous, productive and hardy. Berries large, medium firm with no core; flavor subacid. Season is late July.

Bailey—Plants are vigorous, productive and hardy. The berries are somewhat larger than Eldorado, moderately firm, without core, subacid and of good quality. The season is early August about one week later than Hedrick. Offers promise as a commercial variety.

Darrow—is noteworthy among blackberries for its vigor, reliably heavy production, firmness and good quality. The plants appear hardier than all other selections and varieties in the Station planting. Berries 1 inch long, $\frac{3}{4}$ inch wide, long conic, glossy black. Begins ripening early or about with Eldorado and continues over a long period.

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STRAWBERRIES

The following new strawberry varieties from the breeding work at Geneva have shown considerable promise at Geneva and elsewhere and are considered worthy of extensive testing for the purposes indicated in the descriptions.

Our plants are grown from indexed virus free plants. They are listed in order of ripening.

<i>Variety</i>	<i>Parentage</i>	<i>Where Orig.</i>	<i>Year Introd.</i>
New York 418	Midland × Suwannee	N. Y. Sta.	—
Empire	Dresden × Sparkle	"	1951
Eden	Dresden × Howard	"	1952
Fortune	U.S.D.A. 2827 × self	"	1961
Fulton	Starbright × Pathfinder	"	1959
New York 430	Midland × Suwannee	"	—
Erie	Sparkle × Howard	"	1951
Geneva	N. Y. 316 × Redrich	"	1961
Fletcher	Midland × Suwannee	"	1959
Frontenac	Erie × Sister seedling	"	1959

Empire—Vigorous, productive, producing runners freely, berries large, maintaining size well, conic to wedge conic, light red, very glossy and unusually attractive; skin tougher than Howard (Premier); flesh medium firm, good quality; ripens four to six days later than Howard. Commercial plantings are increasing rapidly and the variety appears to be of unusual promise.

Erie—Vigorous, very productive, producing runners freely. Berries large, maintaining size well, conic bright medium red; skin medium tough; flesh medium firm; quality equal to Howard (Premier); ripens five to eight days later. One of most productive varieties and worthy of trial as a late market sort.

Eden—Vigorous, productive, producing runners freely. Flowers are above the foliage and fruit is held off of the ground to some extent. Berries large, maintaining size well; wedge conic, medium to dark red, glossy, attractive; skin tough; flesh firm, deep red, tart; quality fair; ripens with or slightly before Sparkle. One of the best for freezing and suitable for market.

Fortune (N. Y. 386)—This is a high quality variety for local market and the home fruit garden, being superior to other varieties in flavor, handsome appearance, vigor and productiveness. It is as firm as the firmest shipping varieties. The berries are large, bright red, very attractive, very good quality and ripen in midseason. It is not equal to the best in freezing quality. Fortune is well worthy of trial for the fresh fruit market where quality and appearance are of major importance.

Frontenac—Plants unusually large, very productive, medium red, attractive; skin medium tough, flesh firm, deep red, subacid; quality good; ripens with Sparkle. One of best for freezing. The large plants and relatively few runners make this a good variety for the hill system.

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Fulton—vigorous, productive. Berries medium size, medium red, glossy, attractive even though seeds are conspicuous. Flesh firm, red, subacid; skin tough; quality fair. Its attractive appearance and firmness make it worthy of trial as a shipping berry, as well as for local use.

Fletcher—Plants vigorous productive, producing runners freely with flowers apparently somewhat resistant to frost. Berries above medium size, glossy, attractive medium red, medium firm, subacid, good quality, ripens about with Sparkle. One of the best for freezing, being slightly superior to Sparkle.

Geneva (N. Y. 547)—This is by far the best everbearing strawberry among the many that have been grown in Geneva. The plants are large, vigorous, increase well and are productive, fruiting well in June and throughout the summer and early autumn. The berries are large for an everbearer, slightly darker than medium red, attractive, soft, good. The June crop ripens in midseason. If this variety performs as well elsewhere as it does at Geneva, it will replace all everbearing varieties now being grown. Everbearing strawberries are much more productive grown in hills and mulched than in matted row.

N. Y. 418 (Midland $\times$ Suwannee)—Plants vigorous and productive. Berries large, slightly dark, slightly rough, firm, good, early. At its best a promising early variety, but flowers are some times seriously injured by frost. Worthy of trial on sites that are not frosty.

New York 430 (Midland $\times$ Suwannee)—Plants vigorous and productive. Berries large, medium red, attractive, moderately firm, good, midseason. Looks good here and on Long Island.

FILBERTS

All varieties of filberts are self-unfruitful so ample provision for cross pollination by including two or more varieties in any planting is recommended. At least one of these varieties should have hardy catkins.

Cosford—Nuts are of medium size and are the thinnest shelled of all varieties. The tree is vigorous hardy and productive. Catkins are hardy.

Medium Long—The nuts are slightly larger than those of Cosford and the shells are of medium thickness. The tree is vigorous, hardy and productive and the catkins are moderately hardy.

Italian Red—Nut large, pointed, with medium thick shell, good in quality, tree very vigorous and one of the most productive. Catkins are moderately hardy.

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CURRENTS

Stephens #9—a recent introduction distributed by The Central Experimental Farm, Ottawa. Bushes are vigorous, productive and somewhat spreading, clusters are medium to large and compact. Fruit large and of good quality, less acid than some. Ripens in midseason and has done well at Geneva.

White Imperial—This variety is considerably better than White Grape, the variety usually sold by nurseries.

New York 2110 (Prince Albert $\times$ Perfection). A very vigorous, productive currant that retains its foliage much later than other varieties without spraying. Apparently resistant to leaf spot, clusters small. Worthy of trial for commercial planting.

GOOSEBERRIES

Gooseberries are an excellent home garden fruit, being used for jam, jelly, pie, and dessert. Fredonia and Poorman are the best of many varieties tested at the Experiment Station.

EARLY MID-SEASON		Parentage	Where Orig.	Year Introd.
Poorman	Unknown		Utah	1896
LATE				
Fredonia	Unknown		N. Y. Sta.	1927

Fredonia—Moderately vigorous, productive. Berries very large, dark red, attractive, good, late. Probably the best English type as well as being one of the largest.

Poorman—The plants are the most vigorous, healthiest and most reliably productive of any variety grown at Geneva. The berries are the largest of any American type, red, attractive and the best quality. Every home fruit garden should have a few bushes of Poorman.

ELDERBERRY

The elderberry of the fields and fence-rows has always been popular for pies and home-made wine. It grows readily under domestication as a beautiful ornamental and is as easily improved in the breeder's hand as any other native fruit.

Elderberries are nearly self-unfruitful. Two different varieties should be planted near each other to provide for cross-pollination and to insure a good fruit set.

Adams #1—was selected by the late William W. Adams, Union Springs, N. Y. The plant is strong, vigorous and productive and the fruit clusters and berries are exceptionally large.

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Adams #2—is practically indistinguishable from Adams #1, except it is slightly more vigorous and the color of the bottoms of the current season's canes is more reddish in late fall than that of the Adams #1 canes.

Johns—is very vigorous, producing canes up to 10 feet in height. The plants are less productive than either Adams variety, but the clusters and berries are larger. The foliage is darker green in color. The fruit ripens about two weeks earlier than either Adams variety.

Kent—Growth habit of bush practically identical to Adams #1 and #2. Ripens a few days earlier than Adams varieties.

New York 12 (Adams #2 $\times$ Ezyoff)—Bush larger and more productive than Adams varieties. Preliminary records indicate this to be more productive, and larger berried than any named variety. Ripens later than Adams varieties.

Victoria—Growth habit of bush very similar to Adams #1 and #2. Higher fruit sugar than other varieties.

MISCELLANEOUS

Kwanzan (*Prunus serrulata*)—Japanese Flowering Cherry Ornamental. Flowers pinkish white, 1-1½" in diameter, double flowered. Sets no fruit. Nearly as hardy as sweet cherries.

Nanking Cherry (*Prunus Tomentosa*)—This small tree grows to 8-10 feet in height and is one of the first trees to bloom in the spring. The bright red cherries are smaller than the Morello cherry, juicy, refreshingly acid and pleasantly flavored. Cross pollination is required. This cherry is attractive in foliage, flower and fruit and well worth having where a small tree is needed.

Turkish Hazel (*Corylus Columna*)—This is a handsome tree of pyramidal habit that grows up to 40 feet tall. The rough corky bark is very distinctive and attractive. The nuts are not produced until the trees are 12 to 15 years old and are small and thick-shelled. The Turkish Hazel is a fine tree for the lawn. It has not been winter injured since planted at Geneva in the early twenties.

SPECIAL SERVICES

The Association receives many requests for special items and will, when possible, fill such orders for custom propagation.

We suggest that anyone interested in the following services should place an advance order.

1. Any variety propagated on available clonal stocks such as E.M. IX, VII or II and "interstem" trees.
2. Virus free cherry buds on virus free rootstocks.
3. Stanley prune budded on compatible interstems.

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4. Pears budded on interstem to overcome incompatible combinations.
5. Grapes grafted on rootstocks resistant to phylloxera and nematodes.

When placing orders for custom budding the following conditions should be noted.

1. Orders must be placed one to two years in advance of the time they are to be planted.
2. We will furnish buds of available non-restricted varieties. Customers may furnish buds if they so desire.
3. Trees will be dug as one year whips unless otherwise arranged. If grown for a second year there will be a small additional charge.
4. Price for budding depends upon quantity ordered. The rate per tree is much higher for small orders than for an order for commercial planting.
5. The order must be placed and a deposit of 25% of the amount of the order shall be paid by July 1st of the summer in which the trees are to be budded. If order includes 10 trees or less, a 50% deposit will be required.
6. If trees are lost for any cause, we will rebud or refund the deposit.
7. If the order is cancelled, the customer will forfeit the deposit paid.

POINTS TO CONSIDER BEFORE PLANTING

SOIL—Most kinds of fruit thrive best on deep, well drained and friable soils.

Pears and plums will grow better on heavy soils, while the peach, cherry and strawberry prefer a lighter soil type.

AGE OF TREES—The youngest plant available will transplant best. One year peaches and sweet cherries are most satisfactory and either one or two year trees of apples, pears and plums may be planted. Older trees do not have any advantage.

TIME TO PLANT—Fall planting is favored for most fruits except in the colder areas. Spring planting is preferred for peaches as they may be winter-injured when planted in the fall.

AIR DRAINAGE—Avoid frost pockets.

HARDINESS—The degree of cold that causes injury depends on variety and maturity of plant. Fruit buds of peach may be winter-injured at -10° to -15°F. , sweet cherries at -20°F. , pears at -25°F. , and grapes at -15° to -25°F.

POLLINATION—It is considered good insurance to have at least two or three compatible varieties in the same planting. This is true of all tree fruits, except the self-fruitful peaches.

SELECTION OF VARIETIES—This depends on the length of season to ripen the fruit, the resistance to cold and the use for which the fruit is desired. Such varieties as Fletcher strawberry, Milton raspberry and Red-haven peach are excellent varieties for freezing.

LANDSCAPE VALUE—Most fruits can be used in the background as ornamentals and at the same time produce some fruit for home use. Raspberries, blackberries, grapes, elderberries and filberts make excellent hedges. Currants, gooseberries, blueberries and Tomentosa are fine for border plantings. Tree fruits can be planted about the grounds as specimen trees. Ornamental crab apples and dwarf fruits are especially desirable for this purpose.

TIME OF BEARING—Small fruits require two years, grapes and peaches three to four years, plums and cherries five years, apples and pears five to eight years depending upon variety. Apple and pear trees on dwarfing rootstock bear two to three years earlier than when growing on a standard seedling rootstock.

SPACING TO PLANT—

<i>Fruit</i>	<i>Spacing</i>	<i>No. Plants per Acre</i>
Apple—standard.....	35×35	35
“ on Malling II.....	20×30	72
“ “ “ VII.....	15×25	116
“ “ “ IX.....	10×20	218
Pear.....	30×30	48
“ —dwarf.....	10×20	218
Cherries, peaches, apricots, nectarines.....	25×25	70
Plums.....	20×20	108
Grapes.....	8×10	545
Red raspberries and blackberries.....	2×8	2716
Black and purple raspberries.....	3×8	1814
Currants, gooseberries, elderberries, blueberries.....	5×10	871
Filberts.....	15×15	198
Strawberries.....	$2 \times 3\frac{1}{2}$	6225

PLANTING TIPS

CARE ON ARRIVAL—If soil is not ready, heel the plants in moist soil in a shady spot. If roots are too dry, soak overnight in water.

HOW TO PLANT—Dig a hole large enough to allow all roots to be placed in their natural position. Cut back tips of broken roots. Set slightly deeper than they were in nursery. Place top soil around roots and pack firmly. Water will help the plant to start quicker. Set berries the same depth as they grew in the nursery.

PRUNING—It is important to cut back the tops to about one-half their length, leaving two or three well spaced branches and a leader. Care should be taken to make cuts to an outside bud and to avoid narrow crotches. One year old trees may be cut back to a whip at a point where the branches are desired. Prune grapes to two buds.

CULTIVATION—Young trees respond well to cultivation until August when a cover crop should be sown. Heavy mulch of straw, sawdust or grass can also be used.

PROTECTION FROM RODENTS—Protect young trees with $\frac{1}{4}$ " mesh wire guards $1\frac{1}{2}$ ft. high and 6" in diameter. Mounding with sand or cinders may be helpful. Poison bait applied in the fall is recommended.

FERTILIZATION—Well prepared and fertile soil will need no fertilizer the first year. Then $\frac{1}{4}$ lb. of nitrate of soda or its equivalent should be applied for each year of its growth, spreading it under the tree but away from the trunk.

SPRAY—Send for bulletin E812 to the address below.

For additional information write The New York State Agricultural Experiment Station, Geneva, N. Y., and ask for their list of publications.

We guarantee our nursery stock to arrive in good condition and to grow if given proper care. We cannot be responsible for losses due to poor growing conditions. Notify us immediately if you are not completely satisfied with your order.

